

WHAT IS CLAIMED IS:

1. A computer-implemented method of creating customer promotion response models for use in customer relationship marketing, comprising:

- 5 (a) defining an input data set for the response models, wherein the input data set is comprised of one or more Analytic Variables that are subdivided into independent and dependent variables;
- (b) splitting the input data set into a test sample and a validation sample;
- (c) identifying related independent and dependent variables using the test sample;
- 10 (d) identifying a Transformation Type for each of the identified related independent and dependent variables;
- (e) estimating a Coefficient for each of the identified related independent and dependent variables;
- (f) generating a Model Equation for each of the identified related independent and dependent variables using the identified Transformation Type and estimated Coefficient;
- 15 (g) validating the generated Model Equation by applying it to the validation sample; and
- (h) scoring customers retrieved from a database using the validated Model Equation.

2. The method of claim 1, wherein the Transformation Type is a mathematical operation that identifies an association between the identified related independent and dependent variables.

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3. The method of claim 1, wherein the Coefficient is a relative measure of the identified related independent and dependent variables' contributions to a likelihood of response.

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4. The method of claim 1, wherein the Coefficient's sign indicates whether the independent variable is positively or negatively correlated with the dependent variable.

30 5. The method of claim 1, wherein the Model Equation is a mathematical representation of the association of the identified related independent and dependent

variables that result in the statistical best fit of known responders versus non-responders.

6. The method of claim 1, wherein the validating step (g) further comprises applying the generated Model Equation to the validation sample in order to predict a

5 likelihood of response as compared to an actual response in the validation sample.

7. The method of claim 1, wherein the scoring step (h) further comprises applying the validated Model Equation to the customers retrieved from the database in order to predict responses from the customers in a future promotional campaign.

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8. A computer-implemented system for creating customer promotion response models for use in customer relationship marketing, comprising:

(a) a computer;

(b) logic, performed by the computer, for:

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(1) defining an input data set for the response models, wherein the input data set is comprised of one or more Analytic Variables that are subdivided into independent and dependent variables;

(2) splitting the input data set into a test sample and a validation sample;

(3) identifying related independent and dependent variables using the test

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sample;

(4) identifying a Transformation Type for each of the identified related independent and dependent variables;

(5) estimating a Coefficient for each of the identified related independent and dependent variables;

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(6) generating a Model Equation for each of the identified related independent and dependent variables using the identified Transformation Type and estimated Coefficient;

(7) validating the generated Model Equation by applying it to the validation sample; and

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(8) scoring customers retrieved from a database using the validated Model Equation.

9. The system of claim 8, wherein the Transformation Type is a mathematical operation that identifies an association between the identified related independent and dependent variables.

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10. The system of claim 8, wherein the Coefficient is a relative measure of the identified related independent and dependent variables' contributions to a likelihood of response.

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11. The system of claim 8, wherein the Coefficient's sign indicates whether the independent variable is positively or negatively correlated with the dependent variable.

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12. The system of claim 8, wherein the Model Equation is a mathematical representation of the association of the identified related independent and dependent variables that result in the statistical best fit of known responders versus non-responders.

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13. The system of claim 8, wherein the logic for validating (7) further comprises logic for applying the generated Model Equation to the validation sample in order to predict a likelihood of response as compared to an actual response in the validation sample.

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14. The system of claim 8, wherein the logic for scoring (8) further comprises logic for applying the validated Model Equation to the customers retrieved from the database in order to predict responses from the customers in a future promotional campaign.

15. An article of manufacture embodying logic for creating customer promotion response models for use in customer relationship marketing, comprising:

(a) defining an input data set for the response models, wherein the input data set is comprised of one or more Analytic Variables that are subdivided into independent and dependent variables;

(b) splitting the input data set into a test sample and a validation sample;

- (c) identifying related independent and dependent variables using the test sample;
- (d) identifying a Transformation Type for each of the identified related independent and dependent variables;
- (e) estimating a Coefficient for each of the identified related independent and dependent variables;
- (f) generating a Model Equation for each of the identified related independent and dependent variables using the identified Transformation Type and estimated Coefficient;
- (g) validating the generated Model Equation by applying it to the validation sample; and
- (h) scoring customers retrieved from a database using the validated Model Equation.

16. The article of manufacture of claim 15, wherein the Transformation Type is a mathematical operation that identifies an association between the identified related independent and dependent variables.

17. The article of manufacture of claim 15, wherein the Coefficient is a relative measure of the identified related independent and dependent variables' contributions to a likelihood of response.

18. The article of manufacture of claim 15, wherein the Coefficient's sign indicates whether the independent variable is positively or negatively correlated with the dependent variable.

19. The article of manufacture of claim 15, wherein the Model Equation is a mathematical representation of the association of the identified related independent and dependent variables that result in the statistical best fit of known responders versus non-responders.

20. The article of manufacture of claim 15, wherein the validating step (g) further comprises applying the generated Model Equation to the validation sample in order to predict a likelihood of response as compared to an actual response in the validation sample.

21. The article of manufacture of claim 15, wherein the scoring step (h) further comprises applying the validated Model Equation to the customers retrieved from the database in order to predict responses from the customers in a future promotional  
5 campaign.